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ABSTRACT

This study used case closure data to investigate the demographic and disability characteristics, service, and outcomes of 36,497 consumers who are blind or visually impaired served in state-federal vocational rehabilitation (VR) programs. By contrasting key measures reported by separate blindness agencies and general agencies, findings indicate: (1) separate blindness agencies served a higher percentage of consumers with socio-demographic characteristics associated with lower labor force participation rates; (2) separate blindness agencies served a higher percentage of consumers with the most severe visual impairments; (3) separate blindness agencies provided a higher number of services to consumers with the most severe visual impairments; (4) separate blindness agencies incurred greater service costs; (5) separate blindness agencies served consumers who were more likely to report client income/earnings as their primary source of support at closure; (6) separate blindness agencies rehabilitated a slightly lower percentage of all the consumers who applied for VR services, but rehabilitated a slightly higher percentage of the subgroup of consumers who were accepted and VR services were initiated; (7) separate blindness agencies closed a lower percentage of legally blind consumers as homemakers; and (8) separate blindness agencies closed a higher percentage of legally blind consumers into competitive labor and in sheltered employment. (Contains 29 references.) (CR)

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May 1998

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INTRODUCTION

Issues regarding the merits of separate state agencies providing specialized vocational rehabilitation (VR) services to consumers who are blind have generated spirited discussions throughout the history of the state-federal program. With the flurry of activities associated with the reauthorization of the Rehabilitation Act of 1973, arguments for and against separate service delivery structures are again being intensely debated and are in the forefront of disability issues. Proponents for separate service delivery agencies have argued that dissolution of separate rehabilitation agencies will result in a loss of specialized services (e.g., rehabilitation teaching, orientation and mobility, and low vision services) critical to the independent living of consumers who are blind or visually impaired (Augusto, 1997; Jernigan, 1996). Opponents have argued that the separate service delivery system is duplicative and possibly inequitable for persons with other disabilities (National Council on Disability [NCD], 1997a).

The civilian vocational rehabilitation program began with the passage in 1920 of the Smith-Fess Act (P.L. 66-236). During the 1920s and 1930s, blind persons were considered to have limited vocational potential and received little benefit from this initial rehabilitation legislation (Clunk, 1966). However, vocational opportunities began to expand with the Randolph-Sheppard Act of 1936 (P.L. 74-732) and the Wagner-O'Day Act of 1938 (P.L. 75-739). (The Randolph-Sheppard Act enabled persons who are blind to operate vending facilities in federal buildings while the Wagner-O'Day Act mandated the federal government to purchase products made by blind employees of sheltered work facilities.) As more blind people demonstrated their ability to be successfully employed, public perceptions slowly began to change. Consequently, federal support for the vocational rehabilitation needs of blind consumers was included in the next major rehabilitation legislation, the Barden-LaFollette Act of 1943 (P.L. 79-113). This Act broadened the rehabilitation program by allowing existing state agencies or commissions serving blind persons to administer the state-federal VR program (Rubin & Roessler, 1995). A review of 1994 RSA-911 federal reporting data indicates that this long tradition of specialized rehabilitation services continues today with the majority of consumers who are visually impaired receiving VR services from one of the 25 separate state agencies.

Although consumers who are blind or visually impaired historically have supported the separate agency model of service delivery, other disability groups have tended to favor a general or cross-disability integrative model. This opposite perspective was most recently articulated in a March 1997 statement by the National Council on Disability (1997a). As part of its involvement in the process of reauthorizing the Rehabilitation Act of 1973, NCD recommended that the Rehabilitation Services Administration (RSA) discontinue funding of separate VR programs for clients with visual impairments. Facing major resistance from

blindness-related consumer and professional groups, NCD later withdrew its recommendation in favor of another, asking that the General Accounting Office (GAO) initiate a study to investigate differences in the performance, benefits, and costs of separate and combined agencies (1997b). Although NCD's statements were congruent with its cross-disability philosophy, the Council justified its recommendations largely by pointing to the absence of conclusive empirical research to validate the claim that separate agencies are more effective. The NCD also acknowledged that its position is directly opposed to that of organizations supporting blind people and testimony of blind consumers during related public hearings.

Statement of Problem

Rehabilitation professionals and consumers of major agencies and organizations in the blindness field believe that "specialized, comprehensive services and essential changes in social attitudes about blindness do not occur when rehabilitation services for the blind are provided through a single program which serves both blind and disabled persons" (Spungin, 1997, p. 4). Despite this widespread belief, the paucity of supporting empirical research substantially threatens the future existence of separate state agencies. Organizations supporting single or general rehabilitation programs serving all disability groups have called for a halt to current Title I state plan authority [29 U.S.C. 721(a)] permitting separate agencies for blind consumers (NCD, 1997a).

If significant public policy changes regarding the funding of separate agencies providing specialized blindness services are to be implemented, it is imperative that these policy changes are grounded in thorough empirical studies that examine the current effectiveness of separate and general agencies. Recognizing this need, this study investigated the consumer characteristics, services, and outcomes of consumers who are blind or visually impaired served in separate and general agencies.

Research Questions

To facilitate comparisons with previous research, RSA case closure data was used in the analysis. This study was originally designed as a follow-up to a Rehabilitation Research and Training Center (RRTC) investigation of agency structure classification for fiscal year (FY) 1989 (Talor, Maxson, Johnson, and Robertson, 1996). Therefore, the RSA database for FY 1989 was chosen for analysis. Information from the database was collected on individual case records ("R911" forms) and reported by all of the state-federal rehabilitation programs to meet annual reporting requirements of RSA.

In order to investigate the relationships of agency structure to rehabilitation services for consumers who are blind or visually impaired, the following research questions were proposed.

1. What are the client demographic and disability characteristics as measured by age, gender, race, severity of vision loss, presence of secondary disability, and receipt of transfer payments for rehabilitation consumers with blindness or visual impairments who are served in separate and in general rehabilitation agencies?

2. What are the acceptance rates, costs of services, number of services, and duration of services for rehabilitation consumers with blindness or visual impairments who are served in separate and in general rehabilitation agencies?

3. What are the outcomes as measured by rehabilitation rate, work status, and self-support of rehabilitation consumers with blindness or visual impairments who are served in separate and in general rehabilitation agencies?

Definition of Terms

For purposes of this study, the following terms are defined as follows:

Business Enterprise Program (BEP) refers to vending facilities and other small businesses managed by persons with severe visual impairments under the supervision of a state VR agency.

Client Income includes earnings, interest, dividends, and/or rent as reported on the RSA-911 to describe the individual's largest single source of support at application and at closure.

Competitive labor refers to work for wages, salary, commissions, tips, or piece-rates, but does not include work in sheltered workshops.

General Agencies refer to the 25 state VR agencies providing services to all disabilities plus the 25 state VR agencies co-existing in states with separate blindness agencies and reporting RSA-911 data for FY 1989.

Homemaker refers to men and women whose principal activity is keeping house for their families or themselves, if they live alone.

Legally Blind Group refers to VR consumers who are blind in both eyes, with a correction of not more than 20/200 in the better eye or have a field limitation of less than 20 degrees (RSA major disability codes 100-119).

Separate Agencies refer to the 24 state VR blindness agencies reporting RSA-911 case service data for FY 1989 which had separate administrators, separate budget authorities, and separate state plans for provision of services to blind or visually impaired persons. Although Nebraska does have a separate agency, no data for that agency were available in the FY 1989 database.

Self-employed refers to work for profit or fees in one's own business, farm, shop, or office (excludes BEP).

Some Visual Loss Group refers to VR consumers who are legally blind in one eye, other eye good, or have any other visual impairments (RSA major disability codes 130-149).

Status 08 Closures refer to those clients not accepted for VR services from the applicant status (08 from 02) or from extended evaluation services (08 from 06).

Status 26 Closures refer to those clients accepted for services and closed rehabilitated.

Status 28 Closures refer to those clients accepted for services and closed not rehabilitated after individualized written rehabilitation program (IWRP) initiated.

Status 30 Closures refer to those clients accepted for services and closed not rehabilitated before IWRP initiated.

Transfer Payments are types of public support received during the VR process including SSDI, SSI-aged, SSI-blind, SSI-disabled, AFDC, and General assistance.

Unpaid family worker refers to unpaid family work that cannot be classified according to any of the DOT occupations.

Visually Impaired Group refers to VR consumers who are visually impaired in both eyes, better eye with correction less than 20/60, but better than 20/200, or a corresponding loss in visual field (RSA major disability codes 120-129).

LITERATURE REVIEW

History of Specialized Rehabilitation Services

The Beginning of Separate Employment Programs

Early employment programs for adults with blindness or severe visual impairment were established on the campuses of residential schools serving blind students. The country's first employment program opened in 1840 at the Perkins Institution for the Blind (Obermann, 1965). Given the virtual nonexistence of employment opportunities for persons who were blind or visually impaired, the program was developed to assist the school's graduates in finding jobs. Building upon its early successes, the Perkins' employment program soon became available to all blind persons in the New England area. Quickly, the number of persons seeking employment exceeded available jobs, and in an effort to expand placement options, Perkins established the nation's first sheltered workshop in 1850. Although educational institutes and private rehabilitation organizations in other states also established sheltered employment facilities, these programs were few in number and, for the most part, limited vocational training to piano tuning and to broom and mop making (Magers, 1969).

The Emergence of State Commissions or Agencies

Despite the beginnings of a national network of service delivery, employment opportunities for most blind Americans were isolated or nonexistent for the remainder of the 19th century. Moreover, employment opportunities remained stagnant until the creation of a number of state agencies serving blind adults resulted in an expanded blindness service delivery system. The first of these state agencies was located in Connecticut (Magers, 1969). Established by the state legislature in 1893, the Connecticut Agency for the Blind was responsible for providing teaching in the homes of adults who were blind. After the turn of the century, other commissions or agencies serving only consumers with blindness or visual impairment appeared in several states (Obermann, 1965). These commissions were established to administer the separate social, economic, and medical state programs and to create or expand employment opportunities. The Massachusetts Commission for the Blind was established in 1906 and was successful in placing a blind client in private industry that same year. Early commissions were also established in New Jersey and Ohio in 1908 (Magers). Before 1925, most of the industrial placements were made by separate commissions and private agencies in Chicago, Cleveland, Milwaukee, Minneapolis, Detroit, and Boston (Clunk, 1966). With the establishment and growth

of these public and private agencies, the blindness service delivery system, as we know it today, began to emerge (Magers, 1978).

Early Federal Rehabilitation Legislation

On June 2, 1920, President Woodrow Wilson signed the Smith-Fess Act (P.L. 66-236), the nation's first civilian vocational rehabilitation legislation. The Act provided federal funding to states on a 50-50 matching basis for the provision of vocational guidance, education, adjustment, and placement services to individuals with physical disabilities (Rives, 1966). The Federal Board of Vocational Education was given the responsibility for administering the new program. Because the Board already regarded home economics as a legitimate training area, it is not surprising that the homemaker placement was also considered a valid occupation for clients with disabilities (Rubin & Roessler, 1995).

During the next two decades, the state vocational rehabilitation programs provided few, if any, services to consumers who were blind (Clunk, 1966; Koestler, 1976; Rives, 1966; Rubin & Roessler, 1995). Clunk reported that during 1936 "the general rehabilitation agencies for the sighted of the country reported two blind persons as being rehabilitated" (p.145). For the most part, blind applicants were not considered feasible for rehabilitation and were referred to the separate state commissions and agencies serving blind persons. These commissions and agencies operated with limited budgets and with no federal funding. Consequently, consumers who were blind continued to receive minimal vocational services (Magers, 1969).

Although providing no direct federal funding, the passage of the Randolph-Sheppard Vending Stand Act of 1936 (P.L. 74-732) appreciably expanded the employment opportunities of blind adults. The Act permitted the establishment of vending facilities in federal buildings to be operated by blind persons and empowered the Commissioner of Education to designate the "The State Commission for the Blind in each State, or in any State in which there is no such commission some other public agency to issue licenses to blind persons" (Randolph, 1965). Clunk (1966) credited the successful outcomes of the Randolph-Sheppard program with opening the doors to the promotion and employment of blind persons in the United States and throughout the world.

Employment opportunities continued to expand with the passage in 1938 of the Wagner-O'Day Act (P.L. 75-739). The Act provided for government purchase of products made by sheltered shops and led to the creation of the National Industries for the Blind to coordinate government purchases between the workshops and federal agencies. The Wagner-O'Day Act began to stabilize and substantially expand sheltered work opportunities at a time when economic conditions had previously resulted in a loss of employment for many blind workers (Clunk, 1966).

The return of veterans disabled during World War II gave rise to the next major civilian rehabilitation legislation, the Barden-LaFollette Act of 1943 (P.L. 79-113) (Rives, 1966). Signed by President Franklin Roosevelt, the Barden-LaFollette Act provided the first federal-state support for blind consumers and extended physical restoration services to consumers with physical disabilities. Koestler (1976) addressed the pronounced impact of the Act on the stabilization and growth of specialized agencies and services in the following statement.

> Because little of this progress would have taken place without the specialized skills of the organizations working with and for blind people, one of the most important contributions of the Barden-LaFollette Act was the way it legislated these organizations into partnership with the federal government. The Act specifically provided that any state with a legally constituted commission or agency for the blind could assign to it the administration of the federal-state vocational rehabilitation program for visually disabled persons. For the first time, state agencies for the blind, some of which had been in existence for more than thirty years, were no longer solely dependent on the capricious ups and downs of annual legislative appropriations. For the first time, they had sufficiently firm financial backing to plan, staff, and organize their work on a systematic, comprehensive basis. It was no wonder that some called the Barden-LaFollette Act "the Magna Charta of the blind." (p. 232)

Current Status of Separate Agencies

Currently, 25 states have a separate VR agency or commission which provides rehabilitation services exclusively for consumers who are blind or visually impaired. Each of these agencies has a separate state budget, spending authority, and plan for the provision of services to consumers who are blind. In addition, in each of the 25 states a general VR agency is responsible for the administration and provision of services to the remainder of consumers with disabilities. Because some of the separate agencies restrict services to those consumers with the most severe visual impairments, those with less severe visual impairments (e.g., legally blind one eye, other eye good) may be served by a general agency coexisting with a separate agency in the same state.

In each of the remaining 25 states, territories, and in Washington, DC, consumers who are blind or visually impaired are served in a single (also referred to as general or combined) VR agency which provides rehabilitation services to consumers with all disabilities. In states with a single (combined) agency, the types of service delivery systems may range on a continuum from those having an identifiable subunit responsible for the separate administration and service delivery of all specialized blindness services to those having no separate administration and/or no specialized service delivery staff for blindness services.

Position of Consumer and Professional Groups

Whether considering blindness a "mere physical nuisance" (Jernigan, 1986, p. 371) or a "serious psychological, physiological, and cognitive blow" (Gallagher, 1988, p. 276), leaders within the blindness community have consistently been staunch advocates for specialized services and the preservation of separate agencies. In testimony delivered to the National Council on Disability on March 24, 1997, Edwards reconfirmed this united position when he reported that "Every organization of and for blind people believes in the efficacy of separate state agencies for the blind." Given the paucity and ambiguity of empirical research on the strength of separate agencies and the lack of evidence that general or combined agencies are equally effective, this strong support appears to be largely based upon logical or commonsense observations, case studies, and the genuine fear that specialized services will not survive in general disability agencies.

Previous Research on Efficacy of Specialized Agencies

For the most part, case service data reported annually to RSA by the state-federal programs are used in studies on the effects of agency structure on services to blind or visually impaired consumers. Often, researchers analyzing the annual case service reports have reported missing data (National Accreditation Council for Agencies Serving the Blind and Visually Handicapped [NAC], 1997) and, in some cases, data inconsistent with that actually recorded in individual case records (Giesen, Graves, Schmitt, Lamb, Cook, Capps, & Boyet, 1985). In addition, researchers have encountered difficulties in categorizing VR agencies by their organizational structure for comparative purposes. Because each state has great latitude for structuring state rehabilitation agencies and because each state has its own history and tradition, considerable variability in agency structure is found among rehabilitation agencies. Differences are further compounded by individual state mandates (e.g., services to both children and adults), state financial commitments, opportunities for outsourcing, and composition of professional staff. Thus, broad based differences among state VR agencies have confounded efforts to create a single, accepted agency structure classification system. Issues regarding RSA data and agency structure classification have added complexity in the comparisons studies presented below.

The Mallas Study

In a report to the National Council of State Agencies for the Blind, Management Services Associates (1975) concluded that "the strongest, most effective

and most dynamic (in respect to impact of services on clients and the breadth of spectrum of services offered to clients) systems are those in separate agency status" (p. 22). In the same report, organizational structure was reported to be less important than the presence of strong agency leadership having direct access to the governor and legislature. Referred to as the Mallas study, this investigation was the first major attempt of the blindness field to respond to the growing trend in state government to create large umbrella-type human services organizations for the provision of generic social and rehabilitative services (Hopkins, 1991). Unfortunately, the absence of sufficient documentation of research methodology and supporting data has caused many to question the validity of Mallas's findings (viz., JWK, 1981; Kirchner, 1982).

The J. W. K. Study

In a 1981 study funded by the Rehabilitation Services Administration (RSA) and conducted by JWK International Corporation, the effects of administrative structure on service delivery to rehabilitation clients reporting blindness or visual impairment were again examined. Rehabilitation agencies were categorized into three administrative types according to a decision-tree procedure based on answers to questions on organizational structure. Of the three types, administrative type C was the smallest and most homogeneous group. Of the 14 type C agencies, 13 had separate state plans for services to blind or visually impaired consumers. Administrative type B was the largest group. Although almost half of the type B agencies had a separate state plan, the majority of the directors did not have the authority to initiate formal contacts with the governor or state legislature. Administrative type A included 18 agencies and was the least homogeneous group. While three of these agencies had a separate state plan, most of the agencies did not have a separate legislative appropriation for VR services to blind consumers nor did the majority of directors have authority to initiate formal contact with the governor or state legislature. Comparisons were made among the three structure groupings on selected rehabilitation process and outcome variables. Overall research results indicated that (a) regardless of agency structure, blind consumers were served better by counselors with specialized caseloads; (b) the type of administrative structure had only a slight relationship to outcome; and (c) there was no evidence to indicate that one administrative structure grouping was more cost-effective than another administrative structure.

Of particular concern in investigating comparisons of agency types were the substantial differences between state rehabilitation programs within structure groupings and the resulting lack of a consensus within the field regarding a valid classification method. JWK's classification system was essentially based on the results of 12 "administrative structure" questions completed by each state agency.

Given the diversity of organizational structures, it is not surprising that six administrative types were originally identified, although these were ultimately collapsed into three types.

Kirchner and Peterson Findings

In a later study, researchers from the American Foundation for the Blind (Kirchner & Peterson, 1982) responded to the classification problem by using the official RSA designation of state agencies as their basis for categorizing agencies. In this classification system, each state agency is designated as either a "General" or "Blind" agency. Comparisons of the two agency types were based on analysis of the RSA database of all rehabilitation cases closed in 1971. Although not the most current at that time, this database was chosen to take advantage of a special study done by the Social Security Administration which included data on employment earnings of consumers 1 year after closure. As with the JWK study, results were mixed with small or no differences found on selected outcome variables between the two agency types. Of special note is that although the analysis of employment and earnings 1 year after closure showed no difference between agency types, visually impaired clients of separate (Blind) agencies tended to be members of demographic groups that are generally considered to be more socially disadvantaged. For example, separate agencies served more older women and more African American consumers than did general agencies. Kirchner and Peterson also noted that no data were available on the proportions of clients with multiple disabilities served in the two types of agencies.

NAC Study

More recently, the National Accreditation Council for Agencies Serving the Blind and Visually Handicapped (NAC) (1997) published its report comparing rehabilitation outcomes for consumers served in separate and general agencies. As in the Kirchner and Peterson study, the official RSA "Blind" (Separate) or "General" designation was used in categorizing agencies. In developing the NAC report, selected descriptive data from the 1994 database were requested from RSA. Results showed that separate agencies reported a higher rate of competitive closures, a lower rate of homemaker closures, and higher average weekly earnings for closures than were reported by general agencies. Although the amount of time spent in the VR program was essentially the same for both agency types, the average cost of services was found to be $600 more for clients closed from separate agencies.

RRTC Agency Classification Study

In a 1996 study, Talor, Maxson, Johnson, and Robertson developed questions to classify state agencies serving consumers with blindness or visual impairment. Four administrative structure types were identified on the basis of state agency responses to eight questions regarding line of authority, funding, operating procedures, and presence of a separate state plan for the 1989 fiscal year. As expected, agencies classified as "Separate" were the most similar with all but one state reporting affirmatively to questions on agency administrator status, presence of a separate state plan, budget authority, and administrator reports to a governor or cabinet-level secretary. Agencies classified as "Combined" reported 100% agreement for the question on reporting to the head of another agency and 80% agreement for another three key questions indicating some form of specialized administration of services. Agencies classified as "Partially-Combined" were in 100% agreement on the key question regarding direct line authority over all services except vocational rehabilitation case management. Talor et al. described this group as a variation of the "Combined" type in which the agency administrator has full line authority over some agency personnel (e.g., vending facility, rehabilitation teaching) but not those performing VR case management. As in the JWK study, agencies classified as "General" were the most diverse with agencies reporting only 50% to 80% agreement in response to those questions assessing general agencies. The overall purpose of the Talor et al. study was to develop a classification system that potentially could be used in subsequent investigations of relationships of agency structure to rehabilitation process and outcome variables.

Summary of the Literature Review

Rehabilitation consumers and practitioners in the blindness rehabilitation field accept, without equivocation, the premise that the separate agency delivery system is critical to ensuring quality services and outcomes. Further, they believe that the opportunities for specialized blindness services by qualified staff would not long survive in a generic service delivery environment. Although opposing disability groups have called for the end of federal VR funding of separate agencies serving only those consumers who are blind or visually impaired, there have been few empirical studies investigating the effects of agency structure on rehabilitation services and outcomes. This review confirmed that (a) the heterogeneity of administrative structures has complicated the process of making valid comparisons of rehabilitation programs, (b) the mixed findings from studies have not provided conclusive evidence that separate agencies are more effective nor have they provided evidence that general agencies are equally effective, and (c) additional research is needed. In response, this present study investigated and reported characteristics, services, and

outcomes for blind or visually impaired consumers served in different agency structure types.

METHOD

Subjects

The data for the present study were selected from the 1989 RSA-911 database. This database includes slightly more than 613,000 records from state-federal VR clients whose cases were closed in fiscal year 1989. Of those, we were interested in cases with major disabling conditions of blindness or visual impairments. Thus, in the first round of case selection, the 38,387 cases with RSA codes 100-149 for the primary disabling condition were retained, and all other cases were dropped. In the second round of case selection, cases served in Washington, DC and the US Territories (1,890 cases) were dropped, leaving a total population size of 36,497 cases. This is the number of cases used in most analyses, though deviations from this population size occurred with some variables where there were data-entry errors and/or missing data.

The 1989 RSA-911 Database

The 1989 RSA-911 database was obtained from the RSA Data Management Unit and transferred from tape to CD-ROM as an ASCII text file. The corresponding Data Processing Documentation issued on April 9, 1990 was also obtained and used to identify the structure of the database for further processing.

Converting the Data into an SPSS Data File

The documentation for the 1989 RSA-911 database was used to define the beginning and ending columns for each variable in an SPSS 7.5.1 for Windows 95/NT command syntax file. The data were read as a fixed width ASCII text file. Most variables were defined as numeric variables and the remaining variables were defined as string variables to accommodate alphabetic character entries.

Descriptive variable labels were assigned to each variable with SPSS commands, and labels for each possible value of a variable were assigned where appropriate. In order to facilitate future comparisons with the 1994 data set, the Reporting Manual for the Case Service Report (for the 1994 RSA-911 database) was obtained and variables that were common between the two databases were labeled in accordance with the 1994 documentation; otherwise, labels were assigned according to the 1989 documentation.

Database Cleaning and Variable Recoding

The data were inspected for missing, impossible or invalid codes, and inconsistencies between selected variables. Some variables were recoded so as to exclude invalid values or to extract specific categories from existing variables. User-defined missing values were used to prevent invalid codes from being confused with valid data and to allow them to be treated separately from cases where data were explicitly coded as having been "Not Reported."

Some variables not explicitly stored in the database were computed from existing variables (e.g., age at application was computed from date of birth and date of application). In computing age, some cases were found to have two-digit birth year codes that were unlikely (for example, 97) unless they represented people born in the 1890s, so all birth year codes were converted to four-digit codes to accurately handle these cases. Other new variables were simply recoded forms of existing variables with new labels selected by the authors for the purposes of the present study. For example, the level of vision of a client was a recoded form of the major disabling condition recorded in the RSA-911 database, as described below.

Vision Classification

For the present study, each client was classified into one of three levels of vision. The major disabling condition variable in the database was recoded to represent cases with RSA codes 100-119 as "Legally Blind" (20/200 in better eye or limitation in field with less than 20 degrees), codes 120-129 as "Visually Impaired" (better eye with correction less than 20/60, but better than 20/200, or corresponding loss in visual field), and codes 130-149 as "Some Visual Loss" (blindness one eye or visually impaired, other eye better than 20/60). Analyses were also performed using four levels of vision by dividing the Legally Blind group into clients with no light perception and clients with severe visual impairments (legally blind), but the results were similar enough to the analyses based on three categories that the analyses based on four vision categories were not reported here.

Status Codes

In tracking the vocational rehabilitation process, RSA has developed a standard coding system for use by VR agencies. The process is categorized into statuses represented by two-digit codes. One of several status codes is assigned to a case at the time of closure. A case may be closed as not accepted for services from applicant status (08 from 02); as not accepted for services after extended evaluation status (08 from 06); as rehabilitated (26); as not rehabilitated after an Individualized

Written Rehabilitation Program (IWRP) was initiated (28); or as not rehabilitated before an IWRP was initiated (30). Thus, clients not accepted for services were status 08 closures, while those accepted for services were status 26, 28, or 30 closures. Statuses 28 and 30 are both unsuccessfully rehabilitated cases, differing only in whether services had been initiated by the time of closure. Status 28 clients had received at least some services before the case was closed, while status 30 clients had not yet received services.

It is noteworthy that the RSA and the Council of State Administrators of Vocational Rehabilitation (CSAVR) are collaborating in an ongoing streamlining initiative to increase the effectiveness and efficiency of the state-federal VR program. As a result of this initiative, Schroeder (1998) has reported actions undertaken by many state VR agencies to implement innovative management information systems with expectations these changes will result in more responsive service delivery systems. Clearly, major improvements in the data reporting process will also entail a revision of the current status coding system described in this study.

Focus of Analysis

Pursuant to the above description of status codes, it should be noted that an important focus of the present analysis is on consumers who were accepted for VR services and services were initiated as planned in their Individualized Written Rehabilitation Programs. It was reasoned that the impact of different agency structure types will be manifest most meaningfully for clients who actually receive a planned series of services within the given agency structure type. At the same time, it is recognized that there also may be some "processing" differences between agency structure types that may influence whether and how clients reach the stage of delivery of services. Therefore, in the reporting of results, findings may be based on all applicants for services on some measures (such as acceptance rates, demographics). At other times, when most meaningful, results may be based on applicants and/or consumers accepted for services and actually receiving services and closed in statuses 26 or 28 (such as for number of services received, cost of services).

Agency Classification

In order to facilitate comparisons with previous studies, the current study uses the official RSA designation of state agencies for categorizing agencies. In this classification system, each state agency is designated as either a "General" or "Blind" agency. Rehabilitation consumers reporting visual impairment as their major disabling condition were categorized for analysis purposes as either receiving services from Blind (hereafter referred to as Separate) agencies or from General agencies for

the 1989 fiscal year. (A small number of consumers reporting visual impairments in states with Separate blindness agencies were served in General agencies. These were included with the General agency analysis.) Separate agencies were those reporting a separate administrator, separate budget authority, and separate state plan for provision of services to blind or visually impaired persons. All other agencies were designated as General agencies. These agencies provided rehabilitation services to all disability groups including persons with visual impairments.

Case service data from 74 state VR agencies were included on the FY 1989 database obtained from RSA. (Data from the Nebraska agency for the blind were not available.) Of these 74 VR agencies, 24 were identified as Separate agencies and the remaining 50 were identified as General agencies. The latter included 25 General (sometimes referred to as Combined or Single) agencies providing VR services to all consumers with disabilities in their states plus 25 General agencies coexisting in states with Separate agencies for the provision of services to persons who are blind (see Appendix). In other words, in about half the states, a Separate agency served consumers who are blind and coexisted with a General agency serving other disability groups which may also have served a limited number of consumers with visual impairments. In the other half of the states, a General or Combined agency served all consumers with disabilities, including those with a primary disability of blindness or visual impairment.

Data Analysis

Analysis was directed toward providing comparisons of demographic and disability characteristics, services, and outcomes of consumers with blindness or visual impairment served in Separate and General agencies. SPSS version 7.5.1 for Windows 95/NT was used for all analyses. **Because the data set is a *census* of blindness VR cases closed in 1989 and can be considered population data, descriptive indices were used to report collective characteristics of this population. Thus, these data provide reliable population parameters for VR cases closed in FY 1989. Statistical tests--for example between agency type groups or levels of vision--were not employed since such techniques are designed to test hypotheses and estimate population parameters from *samples*. Because population data are available, such tests are not necessary or appropriate. Even if statistical tests were applied, the increased power from the extremely large number of cases would find small differences to be "statistically significant" thus attaching misleading importance to trivial differences.** It is recommended that interpretations be guided by the apparent "practical significance" of differences as judged by readers who are accustomed to dealing with the measures and indices in the context of program administration. Therefore, this monograph presents tables of means,

proportions, and percentages and highlights those differences and similarities that are of practical interest to readers. It is hoped that these data will serve to provide rehabilitation professionals with critical information pertaining to the debate over the efficacy of Separate agencies for consumers who are blind or visually impaired.

RESULTS

The RSA-911 report of VR consumers closed in fiscal year 1989 was the source for these results. From this database, records of the 36,497 consumers having a primary disability of visual impairment (RSA codes 100-149) from the 50 states were selected for analysis. Unless otherwise noted, deviations from this sample size occurred only in cases where there were data-entry errors and/or missing data.

Sample Characteristics

Although many cases had incomplete records, basic demographic data were available for nearly all cases. Of the 36,497 cases, 53.3% were female (n = 19,450), 46.7% were male (n = 17,036), and 0.03% were missing data on client sex (n = 11). Approximately 77.9% of the clients in the sample were White (n = 28,447), 18.7% were African Americans (n = 6,820), 1.3% were Asian or Pacific Islanders (n = 480), 0.8% were American Indians/Alaskans (n = 278), and data on race were not reported for 1.3% of the sample (n = 472). Hispanic origin is recorded separately from race in the RSA-911, and 8.8% of the clients were of Hispanic origin (n = 3,215), while 90.4% were not (n = 32,977), and 0.8% were missing data (n = 305) on this variable. The mean age of the clients was 44.6 years (SD = 18.79), based on the 35,213 cases for which an age could be determined.

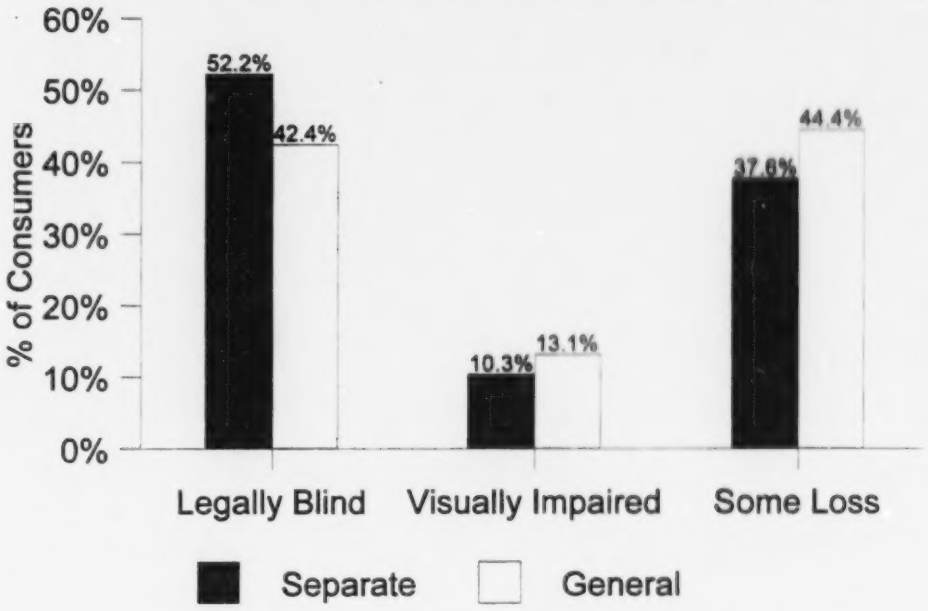
Separate agencies served 51.0% of the consumers (n = 18,621), while the remaining 49.0% of the consumers (n = 17,876) were served by General agencies. A breakdown of the cases by closure status revealed that 29.0% (n = 10,572) of the cases were not accepted for services (status 08 from 02), 1.6% (n = 597) of the cases were not accepted for services after extended evaluation (status 08 from 06), 51.7% (n = 18,881) were successfully rehabilitated, 13.7% (n = 5,013) were closed not rehabilitated after services were initiated (status 28), and 3.9% (n = 1,434) were closed not rehabilitated before services were initiated (status 30).

Research Question 1: What are the demographic and disability characteristics of blind or visually impaired consumers served in the federal-state VR program?

Levels of visual impairment. Of the total number of VR consumers with a primary disability of visual impairment, almost half (47.4%) were *Legally Blind* (20/200 in the better eye or less than 20 degrees field). Of the remainder, 11.7% were *Visually Impaired* (better eye, with correction, less than 20/60, but better than 20/200; or corresponding loss in visual field) and 40.9% had *Some Visual Loss* (blindness one eye or other visual impairment, but more than 20/60 in the better

Figure 1: Consumers by Level of Vision and Agency Structure

Separate agencies serve more consumers who are legally blind.



eye). Figure 1 shows the proportion of consumers in each level of vision by agency structure. While more than half (52.2%) of the consumers served in Separate agencies were *Legally Blind*, only 42.4% of the consumers served in General agencies were *Legally Blind*.

Race and ethnicity. Overall, a slightly smaller percentage of White consumers were found in Separate agencies (77.9%) than in General agencies (80.0%). Percentages of consumers by race, level of vision, and agency structure type are reported in Table 1. Race is subgrouped into three levels of vision loss from most severe to least severe (Legally Blind, Visually Impaired, and Some Visual Loss). For consumers in the *Legally Blind* group, Separate agencies served 1.8% fewer Whites, 3.5% more African Americans, 0.4% fewer American Indians/Alaskans, and 1.4% fewer Asians/Pacific Islanders than did General agencies. For consumers in the *Visually Impaired* group, Separate agencies served 2.5% fewer Whites, 3.9% fewer African Americans, 0.6% fewer American Indians/Alaskans, and 0.9% fewer Asians/Pacific Islanders. For consumers in the *Some Visual Loss* group, Separate agencies served 2.7% fewer Whites, 4.3% more African Americans, 0.5% fewer American Indians/Alaskans, and 1.1% fewer Asian/Pacific Islanders.

Overall, Separate agencies served considerably more consumers of Hispanic origin (12.2%) than did General agencies (5.4%). Separate agencies served 2.8% more Hispanics (7.5% vs. 4.7%) in the *Legally Blind* group, 5.7% more Hispanics (10.1% vs.

Table 1: Race of Consumers by Level of Vision and Agency Structure								
Race of Consumer	**Legally Blind**		**Visually Impaired**		**Some Loss**		**Total**	
	Separate	General	Separate	General	Separate	General	Separate	General
White	79.3%	81.1%	77.6%	80.1%	76.2%	78.9%	77.9%	80.0%
African American	19.3%	15.8%	21.0%	17.1%	22.6%	18.3%	20.7%	17.1%
American Indian/Alaskan	0.4%	0.8%	0.5%	1.1%	0.7%	1.2%	0.5%	1.0%
Asian/Pacific Islander	0.9%	2.3%	0.8%	1.7%	0.5%	1.6%	0.8%	1.9%

4.4%) in the *Visually Impaired* group, and 13.2% (19.4% vs. 6.2%) more Hispanics in the *Some Visual Loss* group than did General agencies.

Sex. A larger percentage of the total consumers from Separate agencies were female (56.1%) compared with consumers of General agencies (50.4%). With respect to levels of vision, the percentage of female consumers in the *Legally Blind* group was similar in Separate and General agencies (54.6% vs. 54.7%). This was not true in the other vision groups where the percentage of female consumers was larger for Separate agencies in the *Visually Impaired* group (57.4% vs. 51.3%) and *Some Visual Loss* group (57.9% vs. 46.0%) than for General agencies. Figure 2 shows these data graphically.

Age. The mean age was greater for consumers of Separate agencies (M=46.4) compared with consumers of General agencies (M=42.8). Comparisons of means by level of vision showed consumers in Separate agencies were older in the *Visually Impaired* group (M = 48.6 vs. 44.7) and older for the *Some Visual Loss* group (M = 46.1 vs. 38.4). The mean age of consumers in Separate agencies and General agencies was approximately the same for the *Legally Blind* group (M = 46.3 vs. 46.9). See Figure 3 for a graphical representation of these data.

Figure 2: Female Consumers by Vision and Agency Structure

Separate agencies serve more females.

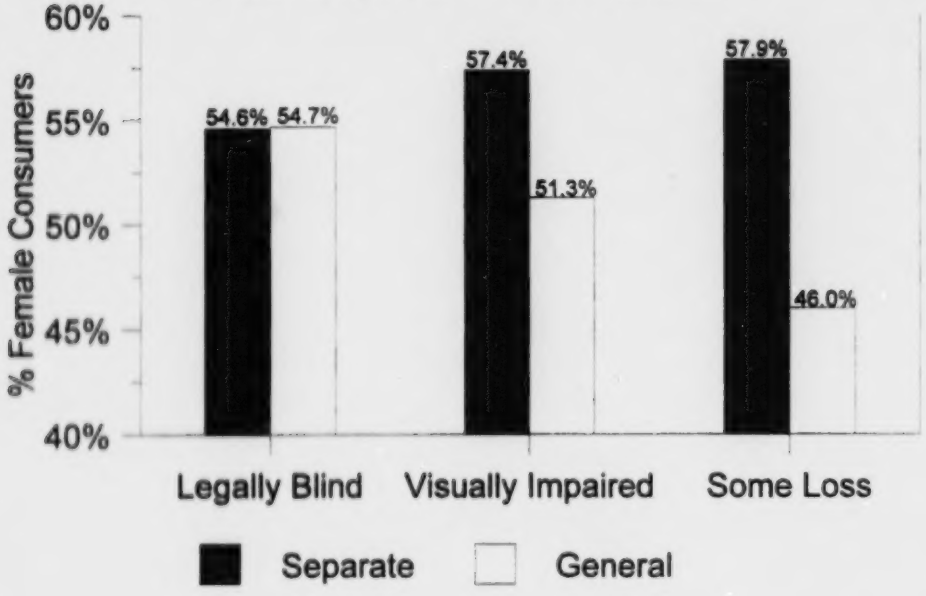


Figure 3: Age of Consumers by Vision and Agency Structure

Legally blind consumers are similar in age.

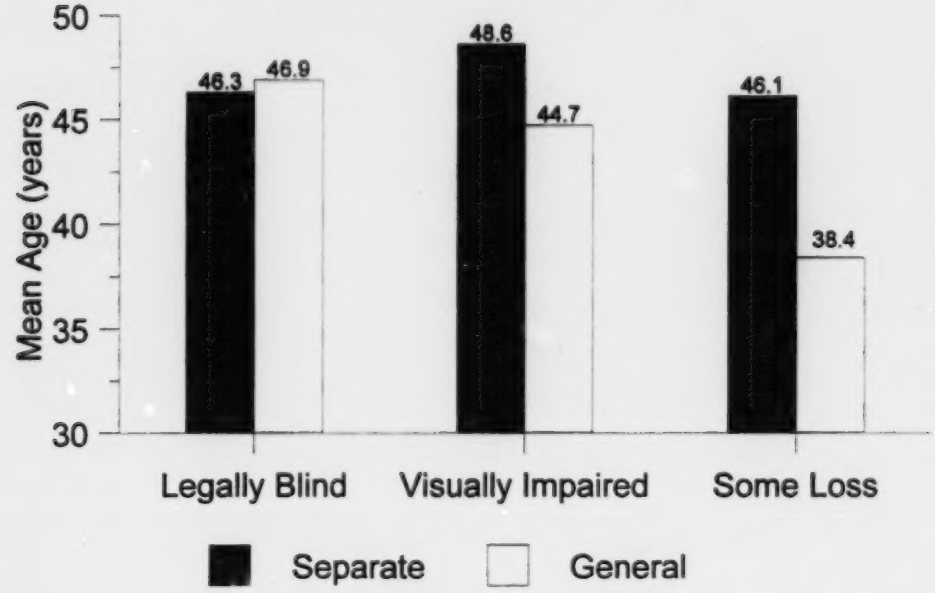
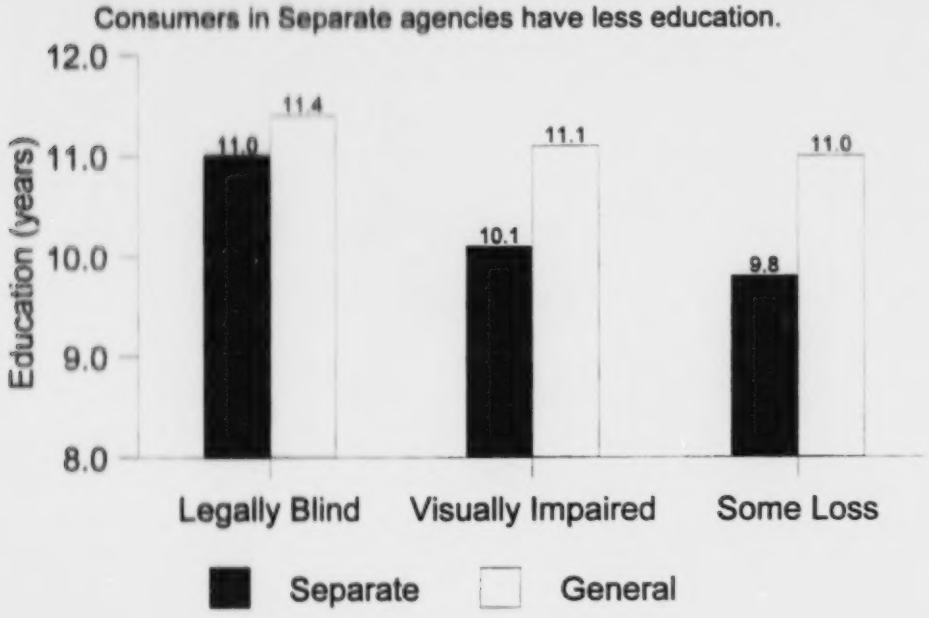


Figure 4: Education by Vision and Agency Structure



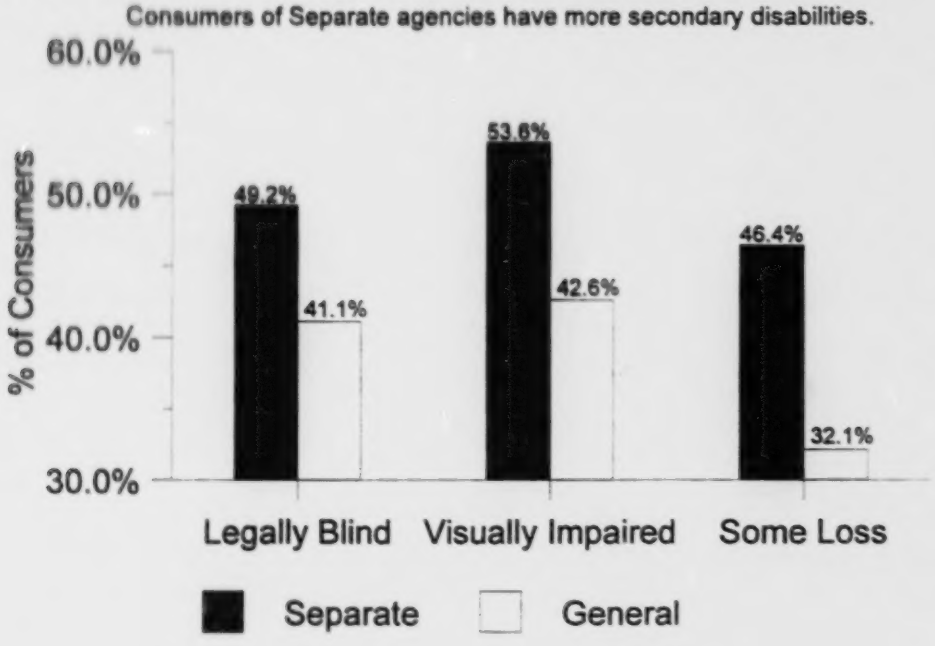
Education. Overall, consumers of Separate agencies reported fewer years of education (M=10.4) than consumers in General agencies (M=11.2). Moreover, as shown in Figure 4, this finding was true for consumers from Separate agencies for all levels of vision loss.

Transfer payments. Table 2 shows that a higher proportion of consumers of Separate agencies received some type of public support during the VR process than consumers of General agencies. Public support was further grouped into either public assistance (AFDC, general assistance, and other public assistance) or Social Security (SSI and SSDI). Overall, Separate agencies served more consumers who received public assistance (13.8% vs. 12.4%) and more consumers who received SSI or SSDI (39.3% vs. 29.8%) when compared with General agencies.

Table 2: Proportion of Clients Receiving Transfer Payments

Type of Assistance	Legally Blind		Visually Impaired		Some Visual Loss		Total	
	Separate	General	Separate	General	Separate	General	Separate	General
Public Assistance	15.0%	11.0%	12.6%	15.6%	11.8%	12.8%	13.8%	12.4%
Social Security	52.5%	48.8%	29.3%	22.4%	14.6%	10.8%	39.3%	29.8%

Figure 5: Secondary Disabilities by Vision and Agency Structure



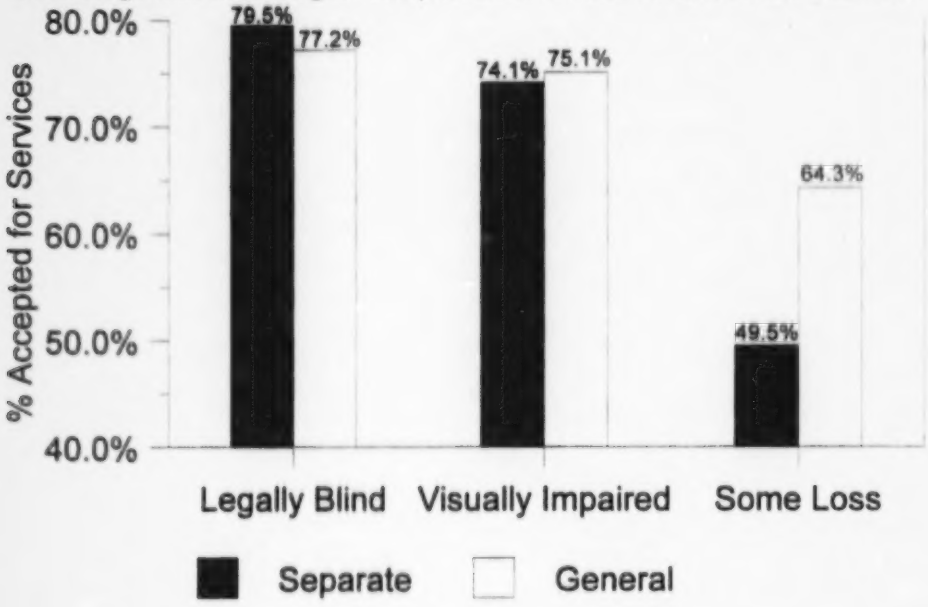
Secondary disability. Overall, a substantially larger percentage of consumers of Separate agencies reported secondary disabilities (48.6%) than were reported in General agencies (37.3%). Moreover, these findings were true for all vision levels, as shown in Figure 5.

Research Question 2: What are the acceptance rates, average number of services received, average cost of services, and duration of services for consumers with blindness or visual impairments served in Separate agencies and General agencies?

Acceptance rates. Overall, Separate agencies accepted 67.7% of all consumers applying for VR services, while General agencies accepted 71.2% of all consumers applying for VR services. In terms of severity of vision loss, Separate agencies accepted 2.3% more consumers in the *Legally Blind* group, 1.0% fewer consumers in the *Visually Impaired* group, and 14.8% fewer consumers in the *Some Visual Loss* group than did General agencies. Figure 6 displays the acceptance rates broken down by level of vision and agency type.

Figure 6: Acceptance Rates by Vision and Agency Structure

General agencies have a higher acceptance rate for consumers with more vision.



Average number of services received. Of the subgroup of *consumers who were accepted for VR and services were initiated* (those closed in status 26 or status 28), Separate agencies provided a greater number of services (M = 4.2) than General agencies (M = 3.8). From this subgroup, *Legally Blind* consumers in Separate agencies received an average of 4.6 services, while *Legally Blind* consumers in General agencies received an average of 3.9 services. *Visually Impaired* consumers in Separate agencies and General agencies received an equal number of services (M = 3.8), while consumers with *Some Visual Loss* received slightly fewer services in Separate agencies (M = 3.5) than those in General agencies (M = 3.6). See Table 3 for a summary of number of services received.

Average cost of services. For all consumers, Separate agencies reported expenditures of $2,427 per consumer, while General agencies reported expenditures of $1,571 per consumer. Moreover, Separate agencies reported higher average expenditures across all levels of vison than did General agencies. *Of the subgroup of consumers who were accepted and VR services were initiated* (closed status 26 and 28), the average cost of services was greater in Separate agencies (M = $3,597) when compared with the average cost of services provided by General agencies (M = $2,241). See Table 3 for a summary of costs by level of vision loss and by agency structure for consumers who received services and were closed status 26 and 28.

Table 3: Consumers who were Accepted for and Received VR Services (Closed Statuses 26 & 28)								
	Legally Blind		Visually Impaired		Some Visual Loss		Total	
	Separate	General	Separate	General	Separate	General	Separate	General
Average Number of Services Received	4.6	3.9	3.8	3.8	3.5	3.6	4.2	3.8
Average Cost of Services	$3,961	$2,469	$3,432	$2,461	$2,936	$1,899	$3,597	$2,241
Duration of Services in yrs.	2.4	2.1	2.0	2.1	1.9	2.2	2.2	2.1

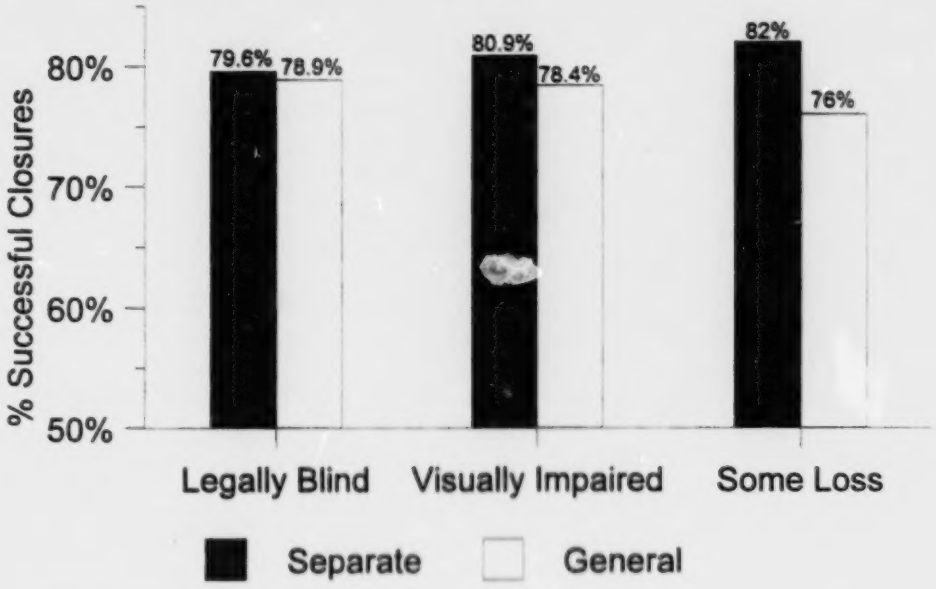
Duration of services. Of the *subgroup of consumers who were accepted for and received VR services* (closed status 26 and status 28), the average length of services for those from Separate agencies was 2.2 years, while the average length of services for those from General agencies was 2.1 years (see Table 3). Consumers reported as *Legally Blind* were served longer in Separate agencies (M = 2.4) than in General agencies (M = 2.1). This was not true for clients in the *Visually Impaired* and *Some Visual Loss* groups. These groups were served for a shorter period in Separate agencies than in General agencies (see Table 3)

Research Question 3: What are the vocational rehabilitation outcomes, as measured by (a) type of closure, (b) work status at closure, and (c) self-support for consumers served in Separate and General agencies?

Rehabilitation rate. Separate agencies rehabilitated (closed status 26) 1.9% fewer consumers (50.8% vs. 52.7%) who applied for VR services than did General agencies. Of the subgroup of *consumers who were accepted and VR services were initiated*, 80.4% were closed rehabilitated (status 26) in Separate agencies and 77.7% were closed rehabilitated (status 26) in General agencies. In this subgroup, Separate agencies closed a higher percentage in the *Legally Blind* group (79.6% vs. 78.9%), in the *Visually Impaired* group (80.9% vs. 78.4%), and in the *Some Visual Loss* group (82.0% vs. 76.0%) than did General agencies (see Figure 7).

Figure 7: Rehabilitation Rate (Consumers Receiving Services)

Separate agencies have a higher rehabilitation rate.



Work status at closure. Of the *total number of Legally Blind consumers* applying for services, Separate agencies reported a higher percentage of Competitive closures (37.7% vs. 32.9%); a higher percentage of Sheltered Employment closures (7.3% vs. 4.3%); a higher percentage of Self-employed closures (5.6% vs. 2.1%); a higher percentage of BEP closures (2.0% vs. 1.7%); a lower percentage of Homemaker closures (46.9% vs. 58.1%); and a lower percentage of Unpaid Family Worker closures (0.5% vs. 0.9%). Work statuses for all consumers by level of vision and agency structure are reported in Table 4.

A similar pattern was reported for the subgroup of consumers in the *Legally Blind group who were accepted for services and received services*. In this subgroup, Separate agencies reported a much higher percentage of Competitive closures (37.7% vs. 32.9%); a higher percentage of Sheltered Employment closures (7.3% vs. 4.3%), a higher percentage of BEP closures (2.0% vs. 1.7%); a higher percentage of Self-employed closures (5.6% vs. 2.1%); a considerably lower percentage of Homemaker closures (46.9% vs. 58.1%); and a lower percentage of Unpaid Family Worker closures (0.5% vs. 0.9%). In the *Visually Impaired* group, Separate agencies closed a lower percentage of consumers in Competitive (45.6% vs 54.5%); a lower percentage in Sheltered Employment (1.4% vs. 2.3%); a higher percentage in Self-employment (7.6% vs. 2.8%); an almost equal percentage in BEP (0.6% vs. 0.5%); a higher percentage in Homemaker (44.2% vs. 39.9%); and a higher percentage in Unpaid

Table 4: Work Status at Closure						
	Legally Blind		Visually Impaired		Some Loss	
	Separate	General	Separate	General	Separate	General
Competitive	37.7%	32.9%	45.6%	54.5%	52.2%	78.1%
Sheltered	7.3%	4.3%	1.4%	2.3%	1.0%	0.8%
Self-Employed	5.6%	2.1%	7.6%	2.8%	8.5%	2.9%
BEP	2.0%	1.7%	0.6%	0.5%	0.1%	0.1%
Homemaker	46.9%	58.1%	44.2%	39.9%	37.5%	17.8%
Unpaid Family Worker	0.5%	0.9%	0.6%	0.1%	0.7%	0.3%

Family Worker (0.6% vs. 0.1%). In the *Some Visual Loss* group, Separate agencies closed a lower percentage of Competitive (52.2% vs. 78.1%); a slightly higher percentage of Sheltered Employment (1.0% vs. 0.8%); a higher percentage of Self-employed (8.5% vs. 2.9%); a higher percentage of Homemakers (37.5% vs. 17.8%); and a higher percentage of Unpaid Family Workers (0.7% vs. 0.3%).

Self-support. For the *subgroup of consumers who were accepted and services were initiated* (closed in status 26 and status 28), Table 5 shows the percentages of consumers who reported Client Income (defined by RSA as earnings, interest, dividends, and rent) as their primary source of support at acceptance and at closure by level of vision and agency structure. Of this subgroup of consumers who received VR services, 20.5% served in Separate agencies reported Client Income as their main source of support at acceptance, while 19.2% served in General agencies reported Client Income as their main source of support at acceptance. Of this same subgroup, 64.2% served in Separate agencies reported Client Income as their main source of support at closure, while 46.5% served in General agencies reported Client Income as their main source of income at closure.

Table 5: Self-Support–Consumers Closed Status 26 & 28								
	Legally Blind		Visually Impaired		Some Visual Loss		Total	
	Separate	General	Separate	General	Separate	General	Separate	General
Self-supporting at Application	14.6%	12.3%	22.8%	19.4%	31.7%	27.2%	20.5%	19.2%
Self-supporting at Closure	51.0%	27.1%	79.7%	48.2%	83.8%	70.3%	64.2%	46.5%

DISCUSSION

The purpose of this study was to examine the vocational rehabilitation experiences of consumers who are blind or visually impaired. More specifically, its purpose was to gain greater insight into how these experiences may differ for persons with primary disabilities of visual impairments who are served in Separate agencies and in General agencies. Consumers were categorized into three groups, Legally Blind, Visually Impaired, Some Visual Loss, with the Legally Blind group having the least vision and the Some Visual Loss group having the most vision. Data from the 1989 RSA-911 national database were used for all analyses. Comparisons of results from investigations of 1971 RSA data (Kirchner & Peterson, 1982), 1977 RSA data (JWK, 1981) and 1994 RSA data (NAC, 1997) have yielded mixed results. By investigating characteristics, services, and outcomes of consumers served in Separate and General agencies, this current study complements previous research by permitting comparisons across studies on key variables.

Consumer Characteristics

Overall differences. Based upon the current analyses, it is clear that consumers of Separate agencies have different demographic and disability characteristics than do consumers of General agencies. More specifically, when compared with General agencies, a higher proportion of applicants of Separate agencies

- have more severe vision loss (i.e., 52.2% vs. 42.4% are Legally Blind);
- are female (56.1% vs. 50.4%);
- are non-White (22.1% vs. 20.0%);
- are of Hispanic origin (12.2% vs. 5.4%);
- have secondary disabilities (48.6% vs. 37.3%);
- receive AFDC or other public assistance (13.8% vs. 12.4%);
- receive SSI or SSDI (39.3% vs. 29.8%);
- have less education (M =10.4 vs. 11.2); and
- are older (M = 46.4 vs. 42.8).

In commenting on JWK findings that Separate agencies close a lower percentage of competitive closures and a higher percentage of homemakers than do General agencies, Kirchner (1982) questioned whether agency types differ in placement outcomes or whether consumer demographics differ for agency types therefore affecting employment outcomes. ***Results from the current study indicate that consumers of Separate agencies are more socially and***

economically disadvantaged than consumers of General agencies. If consumers who are older, less educated, more severely disabled, more likely to be non-White, and more likely to receive transfer payments experience greater barriers to employment, then *any valid evaluation of the efficacy of Separate agencies must consider differences in consumer demographic and disability characteristics across agency types*.

Vision groups. Consumers of Separate agencies are more socially and economically disadvantaged across all levels of vision loss. While a higher percentage of *Legally Blind* applicants of Separate agencies are African American, are Hispanic, have secondary disabilities, and receive transfer payments than are in General agencies, differences are more pronounced for the *Visually Impaired* and *Some Visual Loss* groups. For example, when comparing consumers of Separate agency and General agency in the *Some Visual Loss* group, a higher proportion of applicants in Separate agencies

- are female (57.9% vs. 46.0%);
- have secondary disabilities (46.4% vs. 32.1%);
- are African American (22.6% vs. 18.3%)
- receive SSI or SSDI (14.6% vs. 10.8%);
- have less education (M = 9.8 vs. 11.0);
- are older (M = 46.1 vs. 38.4); and
- are of Hispanic origin (19.4% vs. 6.2%).

Current findings are consistent with Kirchner and Peterson (1982) who also reported that consumers in the other visually impaired (OVI) group served in Separate agencies "were older; proportionately more of them were Hispanics and fewer were Whites; and the levels of education were lower than was true for the OVI clients served by General agencies" (p. 75).

Consumer Services

Acceptance rates. While Separate agencies accept a lower percentage of consumers in the Visually Impaired and Some Visual Loss groups, it was not surprising to find that they accept a higher percentage of consumers in the *Legally Blind* group than do General agencies (79.5% vs. 72.2%). These results are consistent with Kirchner and Peterson (1982) who also reported that Separate agencies accepted more consumers who were legally blind and fewer consumers with other visual impairments when compared with consumers accepted by General agencies. Moreover, JWK (1981) reported that Separate agencies accepted a higher percentage of legally blind consumers than were accepted by General agencies.

Although Separate agencies accept consumers in the *Visually Impaired* group at close to the same percentage (74.1% vs. 75.1%), they accept a much lower percentage of consumers in the *Some Visual Loss* group (49.5% vs. 64.3%) than do General agencies. Given that this finding is consistent over time with the findings of both Kirchner and Peterson and JWK, it is important to investigate reasons for this difference. An analysis of the subgroup of consumers in the *Some Visual Loss* group who were not accepted for services (closed in status 08 from statuses 02 and 06) indicates that Separate agencies compared with General agencies report the following reasons for closure:

- unable to locate/contact/moved (5.7% vs. 13.4%);
- handicap too severe (2.4% vs. 3.8%);
- refused services (11.7% vs. 20.1%);
- death (0.8% vs. 0.8%);
- client institutionalized (0.2% vs. 0.6%);
- transferred to another agency (6.6% vs. 3.8%);
- failure to cooperate (5.7% vs. 16.3%);
- no disabling condition (28.6% vs. 10.6%);
- no vocational handicap (32.0% vs. 18.4%);
- transportation not feasible/available (0.1% vs. 0.1%); and
- all other reasons (5.6% vs. 12.1%).

Because Separate agencies may restrict services to consumers with more severe visual impairments, we expected and found that a higher percentage were closed for reasons of "no disabling condition," "transferred to another agency," or "no vocational handicap." In addition, we found that consumers in the *not legally blind* groups differ considerably in Separate and General agencies on a number of socio-demographic characteristics which have been found to be negatively related to labor force participation (LaPlante, Kennedy, & Trupin, 1996). It is reasonable to expect that major socio-demographic differences would not only affect acceptance rates but also services, rehabilitation rates, and types of work statuses. More simply, consumers in the *Some Visual Loss* group in Separate agencies share one overriding disability characteristic--degree of vision loss with consumers in General agencies but *differ considerably on other socio-economic characteristics*. Therefore, it is not logical or methodologically adequate to evaluate the efficacy of agency types based on their acceptance rates without controlling for obvious demographic and disability differences.

Number of services. Of the subgroup of *consumers who were accepted and services were initiated*, Separate agencies provide a higher number of services to those in the *Legally Blind* group when compared with the number of services provided by General agencies (M = 4.6 vs. 3.9). Again, this finding is expected given

that consumers in the *Legally Blind* group in Separate agencies also spend more time in VR than the *Legally Blind* group in General agencies. Separate and General agencies provide essentially the same number of services to the *Visually Impaired* group and the *Some Visual Loss* group. These results are also consistent with findings that duration of services in Separate agencies is only slightly less for the *Visually Impaired* and *Some Visual Loss* groups when compared to General agencies. In our review of the literature, comparative data reporting differences in the number of services provided by different agency types were unavailable.

Cost of services. It also came as no surprise that the average cost of services in Separate agencies is higher for all three vision groups when compared with the average cost of services in General agencies. This finding is true for all consumers including the subgroup of consumers who were accepted and services were initiated. Cost of services can be explained, in part, by differences in consumer characteristics and therefore, types and number of services provided. It should be noted that Separate agencies provide a different blend of services than do General agencies. For example, the subgroup of *Legally Blind* consumers closed rehabilitated (status 26) when compared with the same subgroup in General agencies, received the following services:

- physical restoration services (54.4% vs. 44.7%);
- university training (8.5% vs. 7.8%);
- adjustment services (51.6% vs. 40.6%);
- business and vocational training (3.3% vs. 5.3%);
- on-the-job training (14.4% vs. 5.8%);
- counseling and guidance (80.2% vs. 64.2%);
- job referral (28.1% vs. 22.9%);
- transportation (35.6% vs. 28.0%);
- maintenance (24.1% vs. 16.3%); and
- job placement (24.5% vs. 20.3%).

A considerable difference was found in the blend of services provided to rehabilitated closures (status 26) for the *Some Visual Loss* group. Given the socio-demographic differences between agency types for the *Some Visual Loss* group, it is not surprising that consumers of General agencies were approximately 4 times more likely to receive university training (12.0% vs. 2.8%) and business/vocational training (8.4% vs. 1.6%) than consumers of Separate agencies. (Consumers of General agencies in the *Some Visual Loss* group are younger, more educated, more likely to be male, and less likely to have a secondary disability.)

Because R-911 data include only the total amount of money spent for purchased services, costs for different categories of services were unavailable and without additional information, there was no evidence to suggest that one agency

type is more cost-effective than another. More importantly, most studies have reported that the cost of services is higher in Separate agencies than in General agencies. For example, JWK (1981) reported that Separate agencies spend more for services to *legally blind* consumers than do General agencies. They also reported that Separate agencies spend less, or the same, for services to the remaining visually impaired consumers. NAC (1997) reported the average cost of services was approximately $600 more in Separate agencies than in General agencies.

Understanding the potential effect of these findings on public policy and, therefore, the survival of specialized programs, a number of interpretations have been advanced within the rehabilitation community. Supporters of specialized programs may equate higher cost with positive outcomes (e.g., quality services), while opponents may equate higher cost with negative outcomes (e.g., duplication and waste). Given the probable relationship of socio-economic demographics to financial need policies, types, and number of services, etc., it is reasonable to expect a higher average cost of services in Separate agencies. Certainly, we can expect diverse responses from the rehabilitation field, given the oftentimes unique perspectives of blind consumers, administrators, and other stakeholders.

Duration of services. The average time (years) spent in VR is greater in Separate agencies for consumers in the *Legally Blind* group (M = 2.4 vs. 2.1) and less for consumers in the *Visually Impaired* (M = 2.0 vs. 2.1) and *Some Visual Loss* groups (M = 1.9 vs. 2.2) when compared to General agencies. Given the expectation that time spent in services would positively correlate with the number of services received, these results are consistent with those which indicate that Separate agencies provide 0.7 more services to consumers in the *Legally Blind* group, an equal number of services to consumers in the *Visually Impaired* group, and 0.1 fewer services in the *Some Visual Loss* group than do General agencies. NAC (1997) did not find any difference in the amount of time spent in services for consumers in Separate and General agencies in its report of 1994 data.

Consumer Outcomes

Rehabilitation rate. Rehabilitation rate is a valuable outcome measure used routinely in program evaluation. From the current study, we found that Separate agencies rehabilitate 50.8% of consumers applying for services, while General agencies rehabilitate 52.7% of those applying for services. Of the subgroup of *consumers who were accepted and VR services were initiated* (status 26 and 28 closures), Separate agencies rehabilitate 80.4%, while General agencies rehabilitate 77.7%. For the most part, these findings are consistent with other studies investigating agency structure. NAC (1997) reported that the overall rehabilitation rate was 2% higher for General agencies, but they also reported that the

rehabilitation rate for consumers with secondary disabilities was 7% higher in Separate agencies. Further, Kirchner's (1982) analysis of the RSA 1977 data indicated that the overall rehabilitation rate in Separate agencies was slightly higher for legally blind consumers than in General agencies (77% vs. 74%) but lower for all other visually impaired consumers (61% vs. 67%). Additionally, Kirchner and Peterson (1982) reported that Separate agencies rehabilitated a higher percentage of legally blind and other visually impaired consumers than General agencies.

Work status. An equally important outcome measure examined in program evaluation is the consumer's work status after receiving rehabilitation services. Rehabilitated consumers are assigned to one of six work statuses at closure--competitive labor market, sheltered workshop, self-employed, BEP, homemaker, and unpaid family worker. Of special concern are the low numbers of BEP and self-employment closures. Specifically, Separate and General agencies combined reported only 208 BEP closures and 863 self-employed closures. Separate agencies closed 1.3% of total consumers into BEP and 6.7% into self-employment, while General agencies closed 0.9% into BEP and 2.5% into self-employment. In contrast, U. S. Census data indicate that people with a work disability report being self-employed at nearly twice the rate of the general population (14% vs. 8%) (Seekins, 1992).

Although the homemaker closure has been considered a successful VR outcome since the first civilian rehabilitation legislation in 1920, Separate agencies have traditionally been credited with having a higher rate of homemaker closures than have General agencies. Despite the fact that current findings suggest that this may be an outdated assumption, members in the disability community continue to embrace it as the truth. For example, in a March 17, 1997 memo to fellow NCD members, Bonnie O'Day reported that the rehabilitation rate for 1993-94 was higher in Separate agencies than in General agencies (67% vs. 60%), but in the same paragraph, she appeared to qualify this finding by reminding Council members that "blindness agencies have a higher rate of closures in homemaker/unpaid family worker status." In this same memo, O'Day cited NAC's (1997) finding that General agencies placed a higher percentage of homemakers and unpaid family workers, but may have cast doubt on the veracity of these findings with her follow-up statement that "This finding is contrary to all other research I could identify." The purpose of O'Day memo was to summarize research and arguments for and against Separate agencies in order to facilitate Council discussion of its relationship to the current reauthorization of the Rehabilitation Act of 1973.

In fact, our results are consistent with NAC's findings that Separate agencies place a considerably lower percentage of legally blind consumers as homemakers (46.9% vs. 58.1%) than do General agencies. Further, Separate agencies place a higher percentage of legally blind consumers into competitive closures (37.7% vs. 32.9%), sheltered employment (7.3% vs. 4.3%), self-employment (5.6% vs. 2.1%), and BEP (2.0% vs. 1.7%). It is noteworthy that analyses of more current RSA data (i.e.,

1989, 1994) show an opposite trend relative to earlier analyses of 1971 RSA data (Kirchner & Peterson, 1982) and 1977 RSA data (JWK, 1981). Continued analyses of available RSA-911 data should allow greater insight into the relationship of type of placement and agency structure.

Self-support. At the time of application for rehabilitation services, consumers are asked to describe their largest single source of support. Based on their responses, 1 of 11 possible categories of support is selected. The categories include (a) client income (earnings, interest, dividends, rent); (b) family and friends; (c) private relief agency; (d) public assistance, at least partly with federal funds (SSI and AFDC); (e) public assistance, without federal funds; (f) public institution–tax supported; (g) workers' compensation; (h) Social Security Disability Insurance; (i) all other public sources; (j) private insurance, and (k) all other sources. In addition, consumers answer an identical question at closure and again are assigned to 1 of 11 possible categories.

Given the estimated 1994 labor participation rate of only 28.9% for adults blind in both eyes (Trupin, Sebesta, Yelin, & LaPlante, 1997), investigations of agency structure and its effect on consumer earnings are especially appropriate and timely. For those persons who were accepted and services were initiated, these analyses indicate that slightly more consumers in Separate agencies reported client income (earnings, interest, dividends, and/or rent) as their largest source of support at application than were reported by consumers in General agencies. Specifically, in the *Legally Blind* group, 14.6% from Separate agencies reported client income/earnings, while 12.3% from General agencies reported client income/earnings. Moreover, consumers with *the most severe visual impairments* were the least likely to report client income/earnings as their largest source of support at application--the less vision involved, the lower the chance of client earnings at application. From the review of the literature, we did not anticipate, but found, that a considerably higher percentage of the subgroup of consumers who were accepted and received services in Separate agencies reported client income/earnings at closure as their largest source of support than reported by consumers in General agencies. Specifically, *of the subgroup of consumers who were accepted and received VR services*, our analyses indicate the following:

1. While 51% of the *Legally Blind* group in Separate agencies reported income/earnings at closure, 27.1% in General agencies reported such income.

2. While 79.7% of the *Visually Impaired* group in Separate agencies reported income/earnings at closure, 48.2% in General agencies reported such income.

3. While 83.8% of the *Some Vision Loss* group in Separate agencies reported income/earnings at closure, 70.3% in General agencies reported such income.

These results are especially noteworthy given the expectation that demographic and disability characteristics more typically characterizing consumers from Separate agencies would generate greater barriers to self-support.

CONCLUSIONS AND IMPLICATIONS

This study uses a descriptive approach to investigate demographic and disability characteristics, services, and outcomes of consumers who are blind or visually impaired served in state-federal VR programs. In contrasting key measures reported by Separate blindness agencies and General agencies, our findings support the following major conclusions:

- **Separate blindness agencies serve a higher percentage of consumers with socio-demographic characteristics associated with lower labor force participation rates.**

- **Separate blindness agencies serve a higher percentage of consumers with the most severe visual impairments (i.e., legally blind).**

- **Separate blindness agencies provide a higher number of services to consumers with the most severe visual impairments (i.e., legally blind).**

- **Separate blindness agencies incur greater service costs (consumers have more severe vision loss and are more likely to have secondary disabilities).**

- **Separate blindness agencies serve consumers who are more likely to report client income/earnings as their primary source of support at closure.**

- **Separate blindness agencies rehabilitate (close status 26)a slightly lower percentage of all consumers who apply for VR services but rehabilitate a slightly higher percentage of the subgroup of consumers who are accepted and VR services are initiated.**

- **Separate blindness agencies close a lower percentage of legally blind consumers as homemakers.**

- **Separate blindness agencies close a higher percentage of legally blind consumers as BEP and self-employed, but both**

agencies report considerably lower percentages than the national average for self-employment.

- **Separate blindness agencies close a higher percentage of legally blind consumers into competitive labor and in sheltered employment.**

Although the current conclusions are based on analysis of fiscal year 1989 RSA-911 data, they are compared with findings from analyses of 1971, 1977, and 1994 RSA data. In doing so, our conclusions are corroborated with studies which also reported that Separate blindness agencies serve consumers who are (a) "more socially disadvantaged," (Kirchner & Peterson, 1982, p. 76); (b) more likely to be legally blind (JWK, 1981; Kirchner, 1982); and (c) more likely to report a secondary disability (NAC, 1997). Although analyses of 1971 and 1977 RSA data indicated that Separate blindness agencies close more homemakers (JWK, 1981; Kirchner & Peterson, 1982), our finding that Separate blindness agencies close a lower percentage of homemakers is consistent with more recent studies (NAC, 1997).

From a statistical perspective, Fisher has advanced the philosophy that in the absence of conclusive significant results of differences between treatments, existing programs should continue until further research shows differences at some predetermined level (Howell, 1992). In other words, policy makers using a Fisherian perspective would continue support of Separate agency programs unless further research demonstrates the superiority of General agencies in serving all blind consumers and particularly those who might be considered socially disadvantaged.

With the foregoing conclusions in mind, it is important to note that Separate blindness agencies continue to exist in a political climate hostile to categorical service delivery models. Although empirical research has not shown that Separate agencies are less effective than General agencies (and, in fact, tends to support the efficacy of Separate blindness agencies), some may argue that Separate agencies are anachronistic and their existence threatens a preferred inclusive or integrative service delivery environment. It appears that supporters of single or combined agencies would have blind consumers take a "trust me" approach that specialized services would survive in a generic environment and be available to them as needed. In a widely distributed e-mail message, C. H. Crawford (personal communication, March 28, 1997) suggests that "when any group of people have needs that are sufficiently unique to warrant specialized and separate services, that they should receive those services from an agency dedicated to servicing that group." Also taking an opposing perspective, Edwards (1977, p. 2) argues that VR "order of selection" policies, which require that individuals with the most severe disabilities are selected for services before other individuals with disabilities, will not "protect effective service delivery for blind people." Edwards also contends that, most importantly,

"blind people have said what they want and have a right to have the service delivery they choose."

In conclusion, we are struck by the impact of socio-demographic characteristics on the VR process (i.e., types, duration, and costs of services received; outcomes, etc.). In spite of serving a higher proportion of socially disadvantaged consumers, our findings indicate that Separate agencies respond as well as, or better than, General agencies on key outcome measures. At the same time, we recognize that (a) consumer characteristics, (b) diversity of specialized service delivery within each agency type, and (c) other environmental forces combine to form complex interactions influencing VR outcomes. These interactions cannot be fully understood outside a multivariate research context. Quality of agency personnel, presence and power of consumer organizations, economics, public policy, opportunities for specialized itinerant and center-based services, agency organizational changes, and employment opportunities are but a few of the variables which combine to forge a unique VR experience for each consumer. With a 1994 estimated labor force participation rate of only 28.9% for persons blind in both eyes and 39.1% for persons with visual impairments in both eyes (Truppin et al., 1997) rehabilitation professionals and policy makers must focus on increasing employment opportunities for consumers who are blind or visually impaired and be wary of any policy changes that would likely lead to increased unemployment.

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APPENDIX

Separate Agencies	General Agencies *	
Arkansas	Alaska	Montana
Connecticut	Alabama	Nebraska
Delaware	Arizona	Nevada
Florida	Arkansas	New Hampshire
Idaho	California	New Jersey
Iowa	Colorado	New Mexico
Kentucky	Connecticut	New York
Massachusetts	Delaware	North Carolina
Michigan	Florida	North Dakota
Minnesota	Georgia	Ohio
Mississippi	Hawaii	Oklahoma
Missouri	Idaho	Oregon
New Jersey	Illinois	Pennsylvania
New Mexico	Indiana	Rhode Island
New York	Iowa	South Carolina
North Carolina	Kansas	South Dakota
Oregon	Kentucky	Tennessee
Pennsylvania	Louisiana	Texas
Rhode Island	Maine	Utah
South Carolina	Maryland	Vermont
Texas	Massachusetts	Virginia
Vermont	Michigan	Washington
Virginia	Minnesota	West Virginia
Washington	Mississippi	Wisconsin
	Missouri	Wyoming

* This category includes general agencies that co-exist in the same state with a separate blindness agency as well as single or combined agencies that exist in states that do not have a separate blindness agency.

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